respectfully submit that the claims now before the Examiner, with entry of this amendment, are patentable, for reasons discussed below.

The invention relates to a glass-free motor vehicle window, which is at least partly transparent and of optical quality equivalent to a window, which comprises:

a.) a plastic layer having a thickness of 5 to 10 mm,

b.) at least one skin layer of a plastic film having a thickness of 10 to 100 μm coated on said plastic layer, and

c.) a scratch-resistant layer having a thickness of 1 to 10 μm supported by said plastic film,

and made by one of two processes as recited; as well as to each of these processes.

The rejections as unpatentable under 35 U.S.C. §103(a) of Claims 40-45, 49, 52, and 62 over U.S. 4,112,171 (Motter et al) in view of U.S. 5,525,401 (Hirmer); of Claims 46 and 47 over Motter et al in view of Hirmer, and further in view of U.S. 5,849,414 (Bier et al); of Claims 48, 50 and 51 over Motter et al in view of Hirmer, and further in view of U.S. 4,634,637 (Oliver et al); and of Claims 53-61 as unpatentable over Motter et al in view of Hirmer, and further in view of U.S. 4,386,042 (Tatebayashi), are respectfully traversed.

Motter et al is concerned with problems arising from protecting a glass substrate for automotive glazing with a plastic cover or shield (column 1, line 43 through the end of column 2). Motter et al disclose that their invention makes it possible to provide automobile glazings have such a protective cover or shield over an inboard glass surface that, in addition to inhibiting lacerative injuries, will not be adversely affected by exposure to the atmosphere, is unaffected by extreme cold, is clearly transparent and practically color free, does not adversely affect the Severity Index of the complete structure, and is highly resistant to

marking, scratching, marring and abrasion (column 3, lines 1-11). While almost the entire disclosure of Motter et al is with regard to a structure which uses a glass-containing substrate, Motter et al does disclose that the substrate may be an "all-plastic structure" (column 1, line 38). However, Motter et al contains no further disclosure regarding the all-plastic structure, such as number of layers, substrate thickness, materials, etc. Moreover, one skilled in the art reading Motter et al would be without a clue as to problems associated with the use of an all-plastic structure. Hirmer is concerned with a vehicle window comprising a relatively thin sheet of clear plastic material having opposed surfaces, and electrically operable defrosting grid adhered to one surface of the relatively thin sheet, and a relatively thick substrate layer of clear plastic having opposed surfaces curved into a vehicle window configuration. The relatively thick substrate layer is adhered to the one surface of the relatively thin sheet and the electrically operable defrosting grid adhered thereto while in contact therewith in a molten state under heat and pressure within a cavity defined by two generally parallel curved dye surfaces of cooperating injection molding dyes so that upon solidification the surfaces of the relatively thin sheet are retained in a curved configuration in generally parallel coextensive relation to corresponding curved surfaces of the relatively thick substrate layer. The relatively thin sheet is disclosed to have a thickness of 5 to 40 mils (column 3, lines 10-12), which is the same as 127 μm-1,016 μm, and the relatively thick substrate layer is disclosed to have a thickness of 50 to 500 mils (column 3, lines 53-54), which is the same as 1.27 to 12.7 mm.

The Examiner asserts that it would have been obvious to use the plastic substrate of Hirmer with its disclosed thickness, in place of the glass substrate of Motter et al.

However, it is not clear why one skilled in the art would make this substitution without the present disclosure as a guide. Why, for example, would one skilled in the art not also incorporate the relatively thin sheet of Hirmer, which has a thickness, as discussed above, which is greater than both the presently-recited at least one skin layer and said scratch-resistant layer? It is clear that the Examiner has selected from Hirmer only that which supports the rejection, without considering the references as a whole.

Moreover, all of the present product claims are now product-by-process claims. Even if one skilled in the art would have combined Motter et al and Hirmer, as suggested by the Examiner, why would one skilled in the art have done so using the presently-recited process steps?

Bier et al disclose a coating for polycarbonate molded parts obtained by hydrolytic polycondensation of an aluminum compound of an organofunctional silane and oxide compound, inclusive of fluorinated silanes disclosed as imparting hydrophobic properties and particularly good resistance to condensed water. Without the present disclosure as a guide, it is not clear why one skilled in the art would have combined Motter et al and Hirmer with Bier et al. Nevertheless, Bier et al do not remedy the basic deficiencies in the combination of Motter et al and Hirmer, as discussed above.

Oliver et al disclose a solar control film having various layers. The Examiner relies on Oliver et al for its disclosure of optically selective metal layers separated by dielectric layers, as well as decorative layers. Again, it is not clear why one skilled in the art would combine Oliver et al with Motter et al and Hirmer in the absence of Applicants' disclosure. Nevertheless, Oliver et al do not remedy the basic deficiencies of Motter et al combined with Hirmer, as discussed above.

Tatebayashi discloses molding a synthetic resin article having a hard coating. As clear from the disclosure of applicable materials in Tatebayashi, such as transparent windows for meters or clocks, Tatebayashi is concerned with relatively small articles in comparison to motor vehicle windows. See, for example, Example 2, which involves coating a lens with a diameter of 50 mm. Why, without the present disclosure as a guide, would one skilled in the art use the process of Tatebayashi to make **any** motor vehicle window, let alone the presently-claimed window? Nor does Tatebayashi disclose the particulars of the recited process steps.

For all of the above reasons, it is respectfully requested that the rejection over prior art be withdrawn.

The rejection of Claims 40-62 under 35 U.S.C. §112, second paragraph, is respectfully traversed. Indeed, the rejection is moot in view of the above-discussed amendment except for the rejection of Claim 43. The rejection of Claim 43 is based on the Examiner's incorrect premise that plastic layer b) is only one layer. However, as can be seen from Claim 42, from which Claim 43 depends, skin layer b.) comprises one or more transparent thermoformable plastic films. In addition, it is respectfully submitted that the term "functional layer" is well-known in the glazing art. Most glazings are laminates of multiple layers. A functional layer thereof is one having a particular function, such as a filtering function, an insulating function, a heat reflective function, etc.

For all of the above reasons, it is respectfully requested that this rejection be withdrawn.

All of the presently pending claims in this application are now believed to be in

immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to Issue.

Respectfully submitted,

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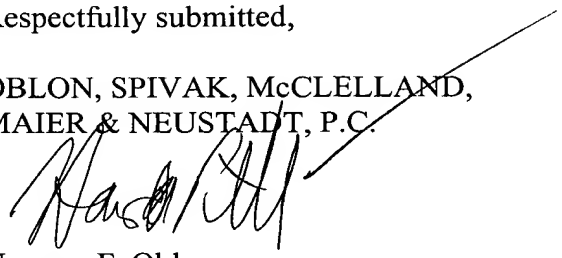

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Please amend Claims 40, 41, 50, 53 and 56 as follows:

--40. (Amended) A glass-free motor vehicle window, which is at least partly transparent and [of optical quality equivalent to a window] which meets French standard R43 for motor vehicle windows, which comprises:

a.) a plastic layer having a thickness of 5 to 10 mm,

b.) at least one skin layer of a plastic film having a thickness of 10 to 100 [mm] μm coated on said plastic layer, and

c.) a scratch-resistant layer having a thickness of 1 to 10 μm supported by said plastic film,

wherein said window is prepared by the following process (A) or process (B), wherein process (A) comprises:

1.) providing said skin layer b.), either flat or in shaped form,

2.) subjecting said skin layer to heat treatment, the skin layer, being supported completely or partly by a mould surface, an auxiliary means for shaping at least part of the skin to the said mould surface being optionally provided so as to relax stresses in the skin, and crosslinking constituent elements thereof; and

3.) joining the skin to said plastic layer a.) by hot pressing in a form, or by thermoplastic injection moulding or reactive injection moulding of the material of the plastic

layer a.), the skin having been positioned in the bottom of the mould in such a way that a scratch-resistant layer c.) is in direct contact with the mould;

and process (B) comprises:

1.) depositing the constituent elements of a scratch-resistant layer on a substantially flat plastic film; and

2.) shaping said film bearing the elements of the scratch-resistant layer into a shape which is the same as or at least similar to the ultimate shape of the end-product, while at the same time at least partly crosslinking the scratch-resistant layer.

41. (Amended) The glass-free motor vehicle window according to Claim 40, wherein said plastic layer a.) comprises a thermoplastic, comprising polycarbonate, poly(methylmethacrylate), an ethylene/vinyl acetate copolymer, poly(ethylene terephthalate), polyurethane or a cycloolefin copolymer, or an ionomer resin or a thermosetting or thermally crosslinkable material of a polyurethane, unsaturated polyester or ethylene/vinyl acetate copolymer, or a combination of several thicknesses of the same or several of these plastics[, wherein said plastic layer a.) thus formed is chemically compatible with the said skin and is capable of giving the assembly the required transparency and optical quality].

50. (Amended) The glass-free automobile window according to Claim 40, wherein the skin layer b.) includes one or more optically selective layers, having thicknesses of between 2 and 35 [mm] μm and separated from each other, as well as from other adjacent layers or films, by dielectric layers.

53. (Amended) A process for preparing [the] a glass-free automobile window [according to Claim 40] which is at least partly transparent, and which meets French standard R43 for motor vehicle windows, which comprises:

a.) a plastic layer having a thickness of 5 to 10 mm,

b.) at least one skin layer of a plastic film having a thickness of 10 to 100 μm coated on said plastic layer, and

c.) a scratch-resistant layer having a thickness of 1 to 10 μm supported by said plastic film, which process comprises:

1.) providing [constituent elements of] said skin layer b.), either flat or in shaped form, [and optionally consolidating them,]

2.) subjecting said skin layer to heat treatment, the skin layer, being supported completely or partly by a mould surface, an auxiliary means for shaping at least part of the skin to the said mould surface being optionally provided so as to relax stresses in the skin, and crosslinking constituent elements thereof; and

3.) joining the skin to said plastic layer a.) by hot pressing in a form, or by thermoplastic injection moulding or reactive injection moulding of the material of the plastic layer a.), the skin having been positioned in the bottom of the mould in such a way that a scratch-resistant layer c.) is in direct contact with the mould.

56. (Amended) A process for preparing [the] a glass-free automobile window [according to Claim 40] which is at least partly transparent, and which meets French standard R43 for motor vehicle windows, which comprises:

a.) a plastic layer having a thickness of 5 to 10 mm,

b.) at least one skin layer of a plastic film having a thickness of 10 to 100 μm coated on said plastic layer, and

c.) a scratch-resistant layer having a thickness of 1 to 10 μm supported by said plastic film, which process comprises:

1.) depositing the constituent elements of a scratch-resistant layer on a substantially flat plastic film; and

[b)] 2.) shaping said film bearing the elements of the scratch-resistant layer into a shape which is the same as or at least similar to the ultimate shape of the end-product, while at the same time at least partly crosslinking the scratch-resistant layer.--